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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/293,198 04/16/99 RAUDALES R 09879/03001

QM02/0703
Mesoamerican Development Institute Corp.
669 Stevens St.
Lowell MA 01851-2804

EXAMINER

JOYCE, A

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 07/03/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/293,198

Applicant(s)

RAUDALES, RAUL

Examiner

Andrea M. Joyce

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 22-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 32-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-3.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the requirement for restriction of **claims 1-21** and **32-42** in Paper No. 6, filed April 17, 2000, is acknowledged. The traversal is on the ground(s) that the "restriction is proper only if the inventions are 'independent and distinct'". This is not found persuasive because the inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process (MPEP § 806.05(e)). In this case, the independently claimed method can be practiced by another materially different apparatus or by hand because the specified process of vegetable product drying by transforming solar energy into heat energy and then exhausting moisture for the drying chamber in the independently claimed method is not a limitation in the independently claimed apparatus. The independently claimed apparatus deals with drying a specific vegetable drying product, such as coffee beans, which is not a limitation in the independently claimed method. Because these inventions are distinct for the reasons given above, they have acquired a separate status in the art as shown by their different classification and the search required for **claims 1-21** and **32-42** is not required for **claims 22-31**, restriction for examination purposes as indicated is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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3. **Claims 1-21** and **32-42** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding **claims 1, 32, 36** and **39**, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). **Claim 37** recites the limitations "The housing" in line 1 and "the cylindrical wall" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-21** and **32-42** are rejected under 35 U.S.C. 102(a) as being unpatentable based upon the printed publication, "Solar-Dried Coffee Technology" found on the website <http://www.sunutility.com>, that described the invention in this country before the invention thereof by the applicant for a patent. An excerpt from this article reveals that the apparatus of the instant application has been in use by Mesoamerican Development Institute since 1994:

The technology of solar crop drying is at the center of the Solar Coffee enterprise. The Mesoamerican Development Institute (MDI) has developed a standalone solar/biomass low-temperature coffee-drying system that uses both thermal and photovoltaic solar technology to enable on-site drying of coffee beans.

The solar coffee-drying process has several product-quality and economic advantages:

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- * this low-temperature process, conducted right after harvest, relies on consistent heat, gently circulated across the coffee beans, optimally preserving the quality and taste of the beans;
- * the solar drying process gives small growers the capacity to dry their coffee beans themselves, which adds value to the product since dry beans are stable and much more valuable than beans that must be sold wet (as coffee "parchment") to intermediaries for processing;
- * the process gives the small growers the flexibility to sell directly to the international and specialty coffee markets—and sell to you, right here on the World Wide Web! This gives the small coffee farmers and their families independence from the intermediary middlemen and a new control of the coffee market.

The solar coffee dryer incorporates well-established renewable-energy technologies: solar thermal collectors, photovoltaics, heat exchangers, and biomass burners. The dryer consists of a coffee bean drying chamber, a solar thermal collector array to generate heat, a solar-electric photovoltaic array and battery bank to power fans and pumps, and a small biomass burner/water thermal storage backup system fueled by coffee parchment for nighttime and rainy or cloudy periods. ***The system has been used in three consecutive harvests, in 1994-1997, in Costa Rica and Honduras, receiving an enthusiastic endorsement from the growers and their cooperatives.***

The benefits of solar coffee-drying to the coffee farmers and their environment are potentially enormous. There are some 500,000 small coffee farmers in Central America, eking out a living by selling coffee berries to brokers for 10 cents a pound on average. In the process they are cutting firewood to dry the coffee beans, in an amount equivalent to clear-cutting approximately 16,500 acres/day of forest over the course of a harvest season. With the introduction of solar drying systems developed by MDI, assisted by the U.S. Department of Energy and the UN Development Program, farmers are able to sell their better-tasting, solar-dried, organically grown coffee beans to specialty houses in the U.S. and Canada for US\$1.20 a pound and up—a much greater and fairer return.

6. **Claims 1-21 and 32-42** are rejected under 35 U.S.C. 102(b) as being unpatentable based upon the printed publications, "Solar/Biomass Coffee Drying Systems" and "Café Solar™" submitted with Supplemental IDS as Paper No. 3 on May 27, 1999, that described the invention in this country more than one year prior to the date of application for patent in the United States. The date, as shown on the publications and the Supplemental IDS, is March 1997 which is more than one year prior to April 16, 1999, which is the application date of the instant application.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mullin et al. (4,099,338), Poisson (4,245,398), Brekke (4,270,521), Kaneko et al. (5,065,528), Sutherland (5,584,127), Itoyama et al.

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(5,849,107), Stoll (5,960,560), Gode (6,065,223), SU 1276-886-A and Chernovits (SU 1653-695-A) all disclose solar drying methods and apparatuses. Berkoff et al. (4,369,585), Bar-Sheshet (5,193,444), Finch (5,632,098) and Lemme et al. (6,036,988) all disclose methods and apparatuses for roasting coffee beans. Schuster (DE 4314645-A1) discloses a method and apparatus for drying biomass. The following websites contain information regarding solar coffee drying apparatuses and methods:

- <http://www.sustainablebusiness.com/html/insider/may00/solar.cfm>
- <http://www.rainforestcoffee.com/Solar Coffee Revolution.htm>
- <http://www.solartoday.org/2000/march-Apr/feature2.html>
- <http://www.sunutility.com/coffee.htm>
- <http://www.sunutility.com/soldrytek.htm>
- <http://www.igc.org/wri/meb/envlink/summer99/nvforum.html>
- <http://www.igc.org/wri/meb/envlink/winter00/menteng.html>

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Andrea M. Joyce** whose telephone number is **(703) 305-0537**. The examiner can normally be reached on Monday through Thursday from 6:30 am until 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise L. Ferensic can be reached at (703) 308-2597. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-7764 for regular communications and (703) 308-7764 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

Steve Gravini
STEVE GRAVINI
PRIMARY EXAMINER
GAU 3749

amj
June 28, 2000